

Remarks

The Office Action mailed March 7, 2007 has been carefully reviewed and the foregoing amendment has been made in consequence thereof.

Claims 1-47 are now pending in this application. Claims 1-21 and 26-39 have been withdrawn. Claims 22-25 and 40-47 stand rejected.

Applicants acknowledge that an Examiner's Interview was conducted on February 15, 2007 during which the Examiner imposed a restriction requirement. Applicant's representative elected with traverse for prosecution of Claims 22-25 and 40-47 on the merits. Accordingly, Claims 1-21 and 26-39 have been withdrawn.

The objection to Claim 22 is respectfully traversed. Applicants have amended Claim 22 to address the issues raised in the Office Action. Accordingly, Applicants respectfully request that the objection to Claim 22 be withdrawn.

The objection to the Drawings is respectfully traversed. Applicants have amended Figures 1 and 2 to address the issues raised in the Office Action. Accordingly, Applicants respectfully request that the objection to the Figures be withdrawn.

The rejection of Claims 22-25 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention is respectfully traversed.

Applicants have amended Claim 22 to include the step of "analyzing the high-resolution image data." Further, Applicants have amended Claim 25 to recite the step of "obtaining high resolution data representative of an area in an object for which high resolution data has not been obtained." Accordingly, Applicants submit that Claims 22 and 25, as amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

For at least the reasons given above, Applicants respectfully request that the Section 112 rejection of Claims 22-25 be withdrawn.

The rejection of Claims 40-47 under 35 U.S.C. § 101 as being directed to non-statutory subject matter is respectfully traversed.

Applicants have amended Claim 40 to recite a “computer-readable medium,” as suggested by the Examiner. Accordingly, Applicants submit that Claims 40-43 are directed to statutory subject matter.

Further, Applicants submit that Claims 44-47 are clearly directed to statutory subject matter. More specifically, Claims 44-47 are directed to an imaging system.

For at least the reasons set forth above, Applicants respectfully request that the Section 101 rejection of Claims 40-47 be withdrawn.

The rejection of Claims 22-25 and 41-47 under 35 U.S.C. § 102(e) as being anticipated by Hsieh et al. (U.S. Patent 6,687,329) (hereinafter referred to as “Hsieh”) is respectfully traversed.

Hsieh describes a method for acquiring subsequent image data in a medical diagnostic context based upon analysis of initial image data. The initial image data is processed via a computer aided diagnosis algorithm to determine whether additional image data acquisition is appropriate. In one embodiment, the subsequent acquisition processes are performed on the same imaging system from which the initial image data originated. In an alternative embodiment, the subsequent acquisition processes are performed on a different imaging system. In one embodiment, the imaging systems are of different modalities. In one embodiment, Hsieh describes the subsequent acquisition of image data being performed automatically without operator intervention. In another embodiment, the prescribed subsequent acquisition sequence is outputted by the system for execution upon command of an operator.

Applicants respectfully traverse the assertion on page 7 of the Office Action that Hsieh describes “substituting high-resolution image data for analyzed low-resolution data.” Rather, Applicants submit that Hsieh merely describes acquiring a first set of image data and acquiring a second set of image data based on an analysis of the first set of image data.

Specifically, Hsieh recites at Column 8, lines 1-5 that “entirely different acquired data may be desired based upon the initial CAD evaluation, such as data acquired via an entirely different modality system.” Accordingly, Hsieh merely describes acquiring a different set of data using a different modality. Applicants submit that merely describing acquiring a different set of data using a different modality does not describe or suggest substituting high-resolution image data for analyzed low-resolution data. Further, Applicants submit that it is clear error to assert that acquiring a different set of data using a different modality describes substituting high-resolution image data for analyzed low-resolution data.

Further, Applicants respectfully traverse the assertion on page 7 of the Office Action that Hsieh describes displaying “the low-resolution data and analysis results of the high-resolution data in a single display.” Rather, Applicants submit that Hsieh merely describes presenting images to a radiologist, but does not describe any method of presenting the images. Specifically, Hsieh recites at Column 10, lines 59-61, that “images may be reconstructed and presented to attending physicians, clinicians, or radiologists as summarized at step 124.” Accordingly, Hsieh merely describes presenting the images to attending physicians, clinicians, or radiologists. Applicants submit that merely describing presenting images to attending physicians, clinicians, or radiologists does not describe or suggest displaying low-resolution data and analysis results of high-resolution data in a single display. Further, Applicants submit that it is clear error to assert that presenting images to attending physicians, clinicians, or radiologists describes displaying low-resolution data and analysis results of high-resolution data in a single display.

Moreover, Applicants submit that Hsieh does not describe or suggest linking low resolution data to high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display. Rather, as described above, Hsieh merely describes presenting images to attending physicians, clinicians, or radiologists. Applicants submit that merely describing presenting images to attending physicians, clinicians, or radiologists does not describe or suggest linking low resolution data to high resolution data to facilitate seamlessly displaying a volume

rendering of the low resolution data and analysis results of the high-resolution data in a single display.

Claim 22 recites a method for a seamless display and analysis of dual resolution image data, wherein the method comprises “reviewing image data at low resolution; performing a volumetric analysis of at least one feature of interest in the low resolution data; substituting high-resolution image data for analyzed low resolution data without operator intervention; analyzing the high-resolution image data; and linking the low resolution data to the high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display.”

Applicants submit that Hsieh does not describe or suggest a method, as recited in Claim 22. More specifically, Hsieh does not describe or suggest substituting high-resolution image data for analyzed low-resolution data. Rather, Applicants submit that Hsieh merely describes acquiring a first set of image data and acquiring a second set of image data based on an analysis of the first set of image data. Specifically, Hsieh recites at Column 8, lines 1-5 that “entirely different acquired data may be desired based upon the initial CAD evaluation, such as data acquired via an entirely different modality system.” Accordingly, Hsieh merely describes acquiring a different set of data using a different modality. Applicants submit that merely describing acquiring a different set of data using a different modality does not describe or suggest substituting high-resolution image data for analyzed low-resolution data.

Further, Applicants submit that Hsieh does not describe or suggest displaying low-resolution data and analysis results of high-resolution data in a single display. Rather, Applicants submit that Hsieh merely describes presenting images to a physician, clinician, or radiologist, but does not describe any method of presenting the images. Specifically, Hsieh recites at Column 10, lines 59-61, that “images may be reconstructed and presented to attending physicians, clinicians, or radiologists as summarized at step 124.” Accordingly, Hsieh merely describes presenting the images to attending physicians, clinicians, or radiologists. Applicants submit that merely describing presenting images to attending physicians, clinicians, or radiologists does not describe or suggest displaying low-resolution data and analysis results of high-resolution data in a single display.

Moreover, Applicants submit that Hsieh does not describe or suggest linking low resolution data to high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display. Rather, as described above, Hsieh merely describes presenting images to attending physicians, clinicians, or radiologists. Applicants submit that merely describing presenting images to attending physicians, clinicians, or radiologists does not describe or suggest linking low resolution data to high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display.

Accordingly, for at least the reasons set forth above, Applicants submit that Claim 22 is patentable over Hsieh.

Claims 23-25 depend directly from independent Claim 22. When the recitations of Claims 23-25 are considered in combination with the recitations of Claim 22, Applicants submit that Claims 23-25 likewise are patentable over Hsieh.

Claim 40 recites a computer program for acquiring medical image data, the program comprising “a computer-readable medium; and a computer program stored on the medium and including routines for: receiving low resolution image data; performing a volumetric analysis of at least one feature of interest in the low resolution data; substituting high-resolution image data for analyzed low resolution data without operator intervention; analyzing the high-resolution image data; and linking the low resolution data to the high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display.”

Applicants submit that Hsieh does not describe or suggest a computer program, as recited in Claim 40. More specifically, Hsieh does not describe or suggest substituting high-resolution image data for analyzed low-resolution data. Rather, Applicants submit that Hsieh merely describes acquiring a first set of image data and acquiring a second set of image data based on an analysis of the first set of image data. Specifically, Hsieh recites at Column 8, lines 1-5 that “entirely different acquired data may be desired based upon the initial CAD

evaluation, such as data acquired via an entirely different modality system.” Accordingly, Hsieh merely describes acquiring a different set of data using a different modality. Applicants submit that merely describing acquiring a different set of data using a different modality does not describe or suggest substituting high-resolution image data for analyzed low-resolution data.

Further, Applicants submit that Hsieh does not describe or suggest displaying low-resolution data and analysis results of high-resolution data in a single display. Rather, Applicants submit that Hsieh merely describes presenting images to a physician, clinician, or radiologist, but does not describe any method of presenting the images. Specifically, Hsieh recites at Column 10, lines 59-61, that “images may be reconstructed and presented to attending physicians, clinicians, or radiologists as summarized at step 124.” Accordingly, Hsieh merely describes presenting the images to attending physicians, clinicians, or radiologists. Applicants submit that merely describing presenting images to attending physicians, clinicians, or radiologists does not describe or suggest displaying low-resolution data and analysis results of high-resolution data in a single display.

Moreover, Applicants submit that Hsieh does not describe or suggest linking low resolution data to high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display. Rather, as described above, Hsieh merely describes presenting images to attending physicians, clinicians, or radiologists. Applicants submit that merely describing presenting images to attending physicians, clinicians, or radiologists does not describe or suggest linking low resolution data to high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display.

Accordingly, for at least the reasons set forth above, Applicants submit that Claim 40 is patentable over Hsieh.

Claims 41-43 depend directly from independent Claim 40. When the recitations of Claims 41-43 are considered in combination with the recitations of Claim 40, Applicants submit that Claims 41-43 likewise are patentable over Hsieh.

Claim 44 recites an imaging system comprising “a first image data acquisition system configured to acquire medical images; and a computer coupled to the image data acquisition system and configured to: receive low resolution image data; perform a volumetric analysis of at least one feature of interest in the low resolution data; substitute high-resolution image data for analyzed low resolution data without operator intervention; analyze the high-resolution image data; and link the low resolution data to the high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display.”

Applicants submit that Hsieh does not describe or suggest an imaging system, as recited in Claim 44. More specifically, Hsieh does not describe or suggest an imaging system that substitutes high-resolution image data for analyzed low-resolution data. Rather, Applicants submit that Hsieh merely describes acquiring a first set of image data and acquiring a second set of image data based on an analysis of the first set of image data. Specifically, Hsieh recites at Column 8, lines 1-5 that “entirely different acquired data may be desired based upon the initial CAD evaluation, such as data acquired via an entirely different modality system.” Accordingly, Hsieh merely describes acquiring a different set of data using a different modality. Applicants submit that merely describing acquiring a different set of data using a different modality does not describe or suggest substituting high-resolution image data for analyzed low-resolution data.

Further, Applicants submit that Hsieh does not describe or suggest an imaging system that displays low-resolution data and analysis results of high-resolution data in a single display. Rather, Applicants submit that Hsieh merely describes presenting images to a physician, clinician, or radiologist, but does not describe any method of presenting the images. Specifically, Hsieh recites at Column 10, lines 59-61, that “images may be reconstructed and presented to attending physicians, clinicians, or radiologists as summarized at step 124.” Accordingly, Hsieh merely describes presenting the images to attending

physicians, clinicians, or radiologists. Applicants submit that merely describing presenting images to attending physicians, clinicians, or radiologists does not describe or suggest displaying low-resolution data and analysis results of high-resolution data in a single display.

Moreover, Applicants submit that Hsieh does not describe or suggest an imaging system that links low resolution data to high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display. Rather, as described above, Hsieh merely describes presenting images to attending physicians, clinicians, or radiologists. Applicants submit that merely describing presenting images to attending physicians, clinicians, or radiologists does not describe or suggest linking low resolution data to high resolution data to facilitate seamlessly displaying a volume rendering of the low resolution data and analysis results of the high-resolution data in a single display.

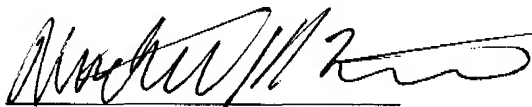
Accordingly, for at least the reasons set forth above, Applicants submit that Claim 44 is patentable over Hsieh.

Claims 45-47 depend directly from independent Claim 44. When the recitations of Claims 45-47 are considered in combination with the recitations of Claim 44, Applicants submit that Claims 45-47 likewise are patentable over Hsieh.

For at least the reasons set forth above, Applicants respectfully request that the Section 102 rejection of Claims 22-25 and 41-47 be withdrawn.

In view of the foregoing amendment and remarks, all the claims now active in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Michael J.A. Lefnauer', written over a horizontal line.

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